

**Abstract****"METHOD AND DEVICE FOR THE NON-INVASIVE ANALYSIS OF METABOLIC PROCESSES"**

The invention relates to a method and an arrangement for the non-invasive analysis of control and regulation processes in human and animal metabolism, in order to be able to draw conclusions about specific illnesses from the changes of individual metabolism parameters.

Said method can be used in preventive analyses for the early detection of cancer, inflammatory diseases, and the determination of the need for antioxidants, for the therapy control of individual clinical pictures and the routine examination of occupational groups with specific physical and psychological stress.

According to the invention, the problem is solved by selecting metabolism-relevant biologically active substances having an autofluorescence from the native fluorescence spectrum in the wavelength range from 287 nm to 600 nm, and linking them in biochemical and biophysical models in order to describe control and regulation processes in the human body.

The fluorescence spectra are recorded by means of an optical measured section consisting of a source of light 5, a fibre optic cable 1 for directing the excitation light to the measuring site, a fibre optic cable 2 for the diversion of the fluorescent light to the spectrometer 6 and an analysis computer 7.

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